IN THE CLAIMS:

Please amend claim 1 as follows below:

1. (Currently amended) A method of clamping and processing a substrate, comprising:

placing the substrate on a clamping plate having a plurality of protrusions extending a first distance from a top surface thereof, wherein the plurality of protrusions have a surface roughness of approximately 100 Angstroms or less, and wherein the plurality of protrusions generally contact the substrate, therein defining a protrusion contact area;

applying a voltage between a plurality of poles of the clamping plate, wherein an electrostatic force associated with the plurality of poles generally attracts the substrate to the top surface of the clamping plate; and

controlling the voltage such that a contact pressure between the substrate and the plurality of protrusions is controlled, therein controlling a thermal transfer between the substrate and the clamping plate.

2. (Original) The method of claim 1, wherein the clamping plate further comprises a semiconductor platform, wherein thermal energy is further transferred through the semiconductor platform.

3. (Original) The method of claim 2, wherein applying the voltage between the plurality of poles comprises applying the voltage between a plurality of portions of a first electrically conductive layer associated with a top surface of the semiconductor platform, wherein the plurality of portions are generally electrically isolated from one another.

4. (Original) The method of claim 3, wherein the plurality of protrusions are generally electrically insulative and are formed over the first electrically conductive

layer.

5. (Original) The method of claim 3, wherein applying the voltage between the plurality of poles further comprises applying the voltage to a plurality of portions of a second electrically conductive layer formed over a bottom surface of the semiconductor platform, wherein the plurality of portions of the second electrically conductive layer are generally electrically isolated from one another, and wherein the second electrically conductive layer comprises a plurality of vertical interconnects electrically connected to the first electrically conductive layer.

6. (Original) The method of claim 5, wherein applying the voltage between the plurality of poles further comprises applying the voltage to a plurality of spring-forced sidewall contact electrodes, wherein the plurality of spring-forced sidewall contact electrodes electrically contact the respective plurality of vertical interconnects.

7. (Original) The method of claim 3, wherein the first electrically conductive layer comprises one or more of tungsten silicide, tungsten, or titanium.

8. (Original) The method of claim 3, wherein the first electrically insulative layer is comprised of silicon dioxide.

9. (Original) The method of claim 2, further comprising transferring thermal energy from the substrate through the semiconductor platform to a base plate associated with the clamping plate.

10. (Original) The method of claim 9, wherein the base plate is comprised of amorphous silicon, aluminum, or copper.

11. (Original) The method of claim 9, further comprising flowing a cooling

fluid through one or more fluid conduits associated with the base plate, wherein thermal energy is transferred between the cooling fluid and the base plate, therein cooling the substrate.

12. (Original) The method of claim 9, further comprising heating the base plate, wherein the substrate is selectively heated.

13. (Original) The method of claim 2, wherein the semiconductor platform is comprised of silicon.

14. (Original) The method of claim 13, wherein the plurality of protrusions are generally comprised of silicon dioxide.

15. (Original) The method of claim 2, wherein the plurality of protrusions comprise an array of micro-electromechanical structures.

16. (Original) The method of claim 15, wherein each of the plurality of micro-electromechanical structures have a surface roughness of approximately 10 Angstroms or less.

17. (Original) The method of claim 1, wherein the voltage applied between the plurality of poles is less than 150V.

18. (Original) The method of claim 1, wherein a ratio of the protrusion contact area to a surface area of the substrate is less than approximately 0.5.

19. (Original) The method of claim 18, wherein a ratio of the protrusion contact area to a surface area of the substrate is between about 0.02 and 0.2.

20. (Original) The method of claim 19, wherein ratio of the protrusion contact area to a surface area of the substrate is approximately 0.10.

21. (Original) The method of claim 1, wherein the first distance is approximately 1 micron.

22. (Original) The method of claim 1, further comprising measuring a temperature associated with the substrate, wherein the measured temperature is utilized in controlling the voltage, therein controlling the thermal transfer between the substrate and the clamping plate.

23. (Original) The method of claim 22, wherein the control is based on the substrate reaching a predetermined temperature.

24. (Original) The method of claim 22, wherein the control is based on a closed-loop feedback of the temperature.

25. (Original) The method of claim 1, wherein applying the voltage further comprises applying a first voltage and a second voltage between the plurality of poles, wherein the first voltage is operable to generally maintain a position of the substrate while maintaining a low heat transfer coefficient between the substrate and the plurality of protrusions, and the second voltage is operable to increase the heat transfer coefficient.

26. (Original) The method of claim 25, wherein the first voltage is greater than 10 V and the second voltage is less than 500 V.